

17. Apparatus according to claim 11 in which the means for selecting an impulse response to apply to the input signal further comprises means for detecting a user input to which the selecting means is responsive.

19. A method according to claim 1, wherein the method further comprises simulating a plurality of different audio processors and storing the impulse response for the plurality of different audio processors.

20. Apparatus according to claim 10, wherein the apparatus is capable of simulating a plurality of different audio processors; and wherein the means for storing stores impulse responses for the plurality of different audio processors.

REMARKS

In response to the Office Action mailed September 24, 2001, Applicant respectfully requests reconsideration. To further the prosecution of this application, amendments have been made in the claims, and the claims as presented are believed to be in allowable condition. The amendments to the claims are simply to clarify the language of the claims, and are not for substantial reasons related to patentability of the claims. Claims 1-20 are pending in this application, and claims 8, 17, 19, and 20 have been amended herein.

The Office Action objected to claims 21 and 22 under 37 C.F.R. §1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. These claims were cancelled in a Preliminary Amendment mailed on February 8, 1999, a copy of which is attached.

The Office Action rejected claims 8, 12, 17, and 19-22 under 35 U.S.C. §112, Second Paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The Office Action asserts that claim 12 has the limitation "apparatus according to claim 11 or claim 12" and is therefore vague. This claim was amended to remove multiple dependencies in the above-mentioned Preliminary Amendment mailed February 8, 1999. The Office Action rejected claims 8 and 17 for being inconsistent with their respective parent claims. The Office Action asserts that these claims are indefinite because the parent claims state that the impulse response is based upon a characteristic of the input signal

and claims 8 and 17 recite “detecting a user input and selecting the impulse response independence thereon.” Applicant has amended these claims to resolve this issue. The Office Action asserts that claims 19 and 20 are unclear since these claims recite a plurality of different audio processors and their parent claims are directed to one audio effect processor. Applicant has amended these claims to resolve this issue. The Office Action asserts that claims 21 and 22 have unclear language since claim 21 calls for a method for use in a method and claim 22 calls for an apparatus for use in an apparatus. Claims 21 and 22 were cancelled in the above-mentioned Preliminary Amendment.

The Office Action rejected claims 1-7, 9-16, and 18 under 35 U.S.C. §102(e) as being anticipated by Kuroki (5,841,875). Kuroki is directed to an audio signal processor having a harmonics modifier for processing an input audio signal to produce an output audio signal (Abstract). As shown in Fig. 1 of Kuroki, a analog input signal is converted to a digital signal at A/D converter 1 and is then fed to signal processing unit 2. The signal processing unit is controlled by CPU 4 and maps the amplitude of the input signal to an address of a input/output conversion table stored in the RAM 6 (Col. 4, lines 8-36). The signal processing unit 2 is shown in more detail in Fig. 2 of Kuroki. The signal processing unit 2 includes an amplitude/address translator 11, a table reader 12, and an interpolator 13. The amplitude/address translator 11 translates input data representative of an amplitude of the input audio signal to a corresponding address of the input/output table stored in RAM 6. Table reader 12 uses this address to retrieve two amplitude values from the table. These two retrieved values are fed to the interpolator 13 in order to produce the digital output data. The interpolator 13 helps to reduce the size of the table stored in RAM 6 by estimating a correct value corresponding to the input data between the two known values that are retrieved by table reader 12 (Col. 4, lines 36-67). Alternatively, if the table in RAM 6 stores time table values corresponding directly to each of the sample data, the interpolator is not needed. In a second embodiment, a DC bias is applied to the signal based upon the amplitude of the signal. After the DC bias is added, it is converted using the input/output conversion table as described above (Col. 5, line 34 to Col. 6, line 16).

By contrast, claim 1 requires “applying the selected impulse response to the input signal to derive an output signal.” Kuroki fails to disclose or suggest this limitation of claim 1. As discussed above, Kuroki discloses a input/output conversion table stored in memory. The table disclosed by Kuroki serves as a mapping between an input value and an output value. In other

words, Kuroki discloses finding a corresponding output value based on an input value and returning the output value. This is very different than Applicant's claim 1 wherein an impulse response is selected and the selected impulse response is applied to the input signal to derive an output signal. Thus, Applicant's claim 1 involves applying one signal to another, while Kuroki discloses simply mapping one value to another. Therefore, claim 1 patentably distinguished over Kuroki. Accordingly, it is respectfully requested that the rejection of claim 1 under 35 U.S.C. §102(e) be withdrawn.

Claims 2-7 and 9 depend from claim 1 and are patentable for the same reasons discussed above in connection with claim 1. Accordingly, it is respectfully requested that the rejection of claims 2-9 under 35 U.S.C. §102(e) be withdrawn. Further, most of these claims contain additional limitations further distinguishing over Kuroki. Additionally, Kuroki does not contain any teaching or suggestion for one skilled in the art to modify the system of Kuroki to achieve Applicant's claimed invention, nor does he provide any motivation to make such changes. The claims therefore also distinguish over Kuroki under 35 U.S.C. §103.

Claim 10 is directed to an apparatus for simulating an audio effect processor. The apparatus comprises "means for applying a selected impulse response to the input signal to derive an output signal." As discussed above, Kuroki discloses an input/output conversion table which maps input values to output values; Kuroki does not disclose means for applying a selected impulse response to the input signal to derive an output signal. Rather, the output signal of Kuroki is simply a mapping of the input value using the input/output conversion table. Thus, claim 10 patentably distinguished over Kuroki. Accordingly, it is respectfully requested that the rejection of claim 10 under 35 U.S.C. §102(e) be withdrawn.

Claims 11-16 and 18-20 depend from claim 10 and are patentable for at least the same reasons discussed above in connection with claim 10. Accordingly, it is respectfully requested that the rejection of these claims under 35 U.S.C. §102(e) be withdrawn. Further, most of these claims contain additional limitations further distinguishing over Kuroki. Additionally, Kuroki does not contain any teaching or suggestion for one skilled in the art to modify the system of Kuroki to achieve Applicant's claimed invention, nor does he provide any motivation to make such changes. The claims therefore also distinguish over Kuroki under 35 U.S.C. §103.

The Office Action rejected claims 8 and 17 under 35 U.S.C. §103(a) as unpatentable over Kuroki in view of Shimizu (6,005,949). Shimizu is directed to a sound effect control device.

Shimizu discloses a device for selecting one of a plurality of sound sources and one of a plurality of sound effect circuits based on the sound source selected and data stored in memory.

(Abstract). Shimizu does not disclose or suggest storing impulse responses, nor does Shimizu disclose or suggest applying impulse responses to an input signal. Thus, Shimizu does not cure the infirmities of Kuroki. Claim 8 depends from claim 1, and is thus patentable over Kuroki in view of Shimizu. Claim 17 depends from claim 10 and is also patentable over Kuroki in view of Shimizu. Accordingly, it is respectfully requested that the rejection of claims 8 and 17 under 35 U.S.C. §103(a) be withdrawn.

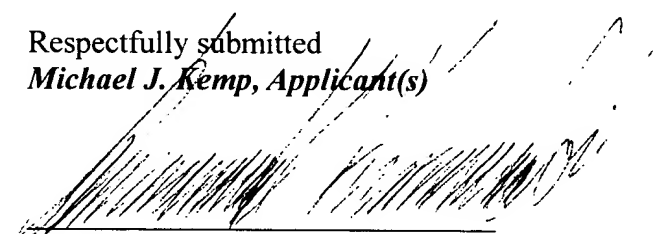
CONCLUSION

In view of the foregoing amendments and remarks, this application should now be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the Applicant's attorney at the telephone number listed below.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Respectfully submitted
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